**AM335X之NAND分区**

**一、UBoot分区相关**

**1.uboot版本：2013.10**

**2.板级配置文件：/include/configs/am335x\_evm.h**

**3.nand相关配置：**

/\* NAND support \*/

#ifdef CONFIG\_NAND

……

#else

#define NANDARGS ""

#endif /\* !CONFIG\_NAND \*/

其中具体与分区有关及修改内容如下：

/\* djf 20151127 change del start \*/

/\*

#define MTDPARTS\_DEFAULT "mtdparts=nand.0:" \

"128k(NAND.SPL)," \

"128k(NAND.SPL.backup1)," \

"128k(NAND.SPL.backup2)," \

"128k(NAND.SPL.backup3)," \

"256k(NAND.u-boot-spl-os)," \

"1m(NAND.u-boot)," \

"128k(NAND.u-boot-env)," \

"128k(NAND.u-boot-env.backup1)," \

"8m(NAND.kernel)," \

"-(NAND.rootfs)"

\*/

/\* djf 20151127 change del end \*/

/\*djf 20151127 change add start \*/

#define MTDPARTS\_DEFAULT "mtdparts=nand.0:" \

"2m(NAND.SPL)," \

"2m(NAND.SPL.backup1)," \

"2m(NAND.SPL.backup2)," \

"2m(NAND.SPL.backup3)," \

"2m(NAND.u-boot)," \

"2m(NAND.u-boot-env)," \

"8m(NAND.kernel)," \

"-(NAND.rootfs)"

/\* djf 20151127 change add end \*/

#undef CONFIG\_ENV\_IS\_NOWHERE

#define CONFIG\_ENV\_IS\_IN\_NAND

/\* djf 20151127 change del start \*/

/\*

#define CONFIG\_ENV\_OFFSET 0x001C0000

#define CONFIG\_ENV\_OFFSET\_REDUND 0x001E0000

\*/

/\* djf 20151127 change del end \*/

/\* djf 20151127 change add start \*/

#define CONFIG\_ENV\_OFFSET 0x00a00000

#define CONFIG\_ENV\_OFFSET\_REDUND 0x00c00000

/\* djf 20151127 change add end \*/

#define CONFIG\_SYS\_ENV\_SECT\_SIZE CONFIG\_SYS\_NAND\_BLOCK\_SIZE

#endif

/\* NAND: SPL related configs \*/

#if !defined(CONFIG\_SPI\_BOOT) && !defined(CONFIG\_NOR\_BOOT) && \

!defined(CONFIG\_EMMC\_BOOT)

#define CONFIG\_SPL\_NAND\_AM33XX\_BCH

#define CONFIG\_SPL\_NAND\_SUPPORT

#define CONFIG\_SPL\_NAND\_BASE

#define CONFIG\_SPL\_NAND\_DRIVERS

#define CONFIG\_SPL\_NAND\_ECC

#define CONFIG\_SYS\_NAND\_U\_BOOT\_START CONFIG\_SYS\_TEXT\_BASE

/\* dragoniye modify

#define CONFIG\_SYS\_NAND\_U\_BOOT\_OFFS 0x000C0000

\*/

/\* djf 20151127 change

#define CONFIG\_SYS\_NAND\_U\_BOOT\_OFFS 0x00080000

\*/

#define CONFIG\_SYS\_NAND\_U\_BOOT\_OFFS 0x00800000

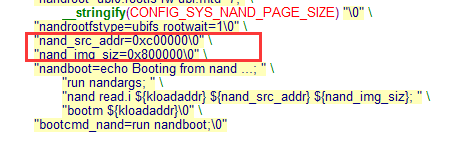
**注：需修改的共三部分：CONFIG\_ENV\_OFFSET\_REDUND为默认的分区架构；CONFIG\_ENV\_OFFSET和CONFIG\_ENV\_OFFSET\_REDUND为环境变量的地址；CONFIG\_SYS\_NAND\_U\_BOOT\_OFFS为uboot.img的地址。**

**4.配置文件中还包含有其它文件：**

#include <configs/ti\_am335x\_common.h> -->

#include <configs/ti\_armv7\_common.h>

该文件中也需要修改，见下图：



红框中两个值分别对应nand中ubi.img的地址和分区大小。

至此uboot中nand分区相关就修改完了，其中分区时要注意最好让每个区都是nand 的block的整数倍。环境变量分区大小不是整数倍的话，在uboot下不能使用saveenv。

**二、Kernel分区相关**

**1.板级文件：(/arch/arm/mach-omap2/board-am335xevm.c)**

**2.具体分区：**

/\* NAND partition information \*/

static struct mtd\_partition am335x\_nand\_partitions[] = {

/\* All the partition sizes are listed in terms of NAND block size \*/

{

.name = "SPL",

.offset = 0, /\* Offset = 0x0 \*/

.size = SZ\_512K \* 4,

},

{

.name = "SPL.backup1",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0x200000 \*/

.size = SZ\_512K \* 4,

},

{

.name = "SPL.backup2",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0x400000 \*/

.size = SZ\_512K \* 4,

},

{

.name = "SPL.backup3",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0x600000 \*/

.size = SZ\_512K \* 4,

},

{

.name = "U-Boot",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0x800000 \*/

.size = 4 \* SZ\_512K,

},

{

.name = "U-Boot Env",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0xa00000 \*/

.size = 4 \* SZ\_512K,

},

{

.name = "Kernel",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0xc00000 \*/

.size = 16 \* SZ\_512K,

},

{

.name = "File System",

.offset = MTDPART\_OFS\_APPEND, /\* Offset = 0x1400000 \*/

.size = MTDPART\_SIZ\_FULL,

},

};

其中宏SZ\_512K在/include/asm-generic/size.h中定义：

#define SZ\_512K 0x00080000

kernel中的nand分区比较简单，前一个分区的首地址加上大小就是后一个分区的首地址，以此类推。